CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being:
transmitted to the United States Patent and Trademark Office using EFS-Web;
facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300; or
deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on: December 26, 2007

Brian C. Kunzler
Name

/Brian C. Kunzler/
Signature

Attorney Docket No. TUC920030130US1 PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Serial No.: 10/718,420 Art Unit: 2166

Appellant: Brian J. Corcoran et al. Confirmation No.: 9652

Filed: November 20, 2003

For: APPARATUS, SYSTEM, AND METHOD FOR COMMUNICATING A BINARY CODE IMAGE

Examiner: Pham, Khanh B.

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. § 41.37(a)

This is an appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner dated July 24, 2007, which finally rejected claims 1-15, 17-22, 24, and 26-40 in the above-identified application. The Office date of receipt of Appellant's Notice of Appeal was October 24, 2007. This Appeal Brief is hereby submitted pursuant to 37 C.F.R. § 41.37(a).

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest is the assignee of the full interest in the invention, International Business Machines Corporation of Armonk, New York.

II. RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision in the instant appeal.

III. STATUS OF CLAIMS

Claims 1-15, 17-22, 24, and 26-40 are pending in the application and were finally rejected in the Office Action mailed or July 24, 2007. In particular, claims 1-14, 17-22, 26, 27, 29-36, and 38-40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Sharon et al. (U.S. Pat. Pub. No. 2003/0229707, hereinafter Sharon). Additionally, claims 15, 24, 28, and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharon in view of Brown (U.S. Pat. No. 6,839,825, hereinafter Brown).

Claims 1-15, 17-22, 24, and 26-40 are the subject of this appeal. A copy of claims 1-15, 17-22, 24, and 26-40 as they stand on appeal is set forth in the Claims Appendix.

IV. STATUS OF AMENDMENTS

A proposed amendment was submitted subsequent to the Final Office Action mailed July 24, 2007. The proposed amendment was directed to the language of claim 2. As explained in the Advisory Action mailed October 2, 2007, the proposed amendment to claim 2 was entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

This section of this Appeal Brief is set forth to comply with the requirements of 37 C.F.R. § 41.37(c)(1)(v) and is not intended to limit the scope of the claims in any way. Exemplary implementations of the limitations of independent claims 1, 13, 18, 27, 29, and 40 are described below.

The language of claim 1 relates to a computer readable storage medium storing a self-descriptive binary data structure executable on a computer processor for communicating binary data between a source device and a target device. In particular, claim 1 recites a plurality of data segments, a target data set, and a data structure descriptor. Each of the data segments includes a segment header and a data field. Detailed Description, page 15, paragraph 54, lines 1-2. The segment header is descriptive of the corresponding data segment. Detailed Description, page 15, paragraph 54, lines 2-3. The target data set is stored within the data field, and the data structure descriptor identifies the location of the target data set within the data field. Detailed Description, page 16, paragraph 60, lines 1-8.

The language of claim 13 relates to a system for communicating binary data using a self-descriptive binary data structure capable of being stored in a computer readable storage medium. The claimed system includes a communications channel, a source communication device, and a target communication device. See Figure 6. The source communication device is connected to the communications channel and configured to transmit a self-descriptive binary data structure. Brief Summary, page 4, paragraph 12, lines 1-5. The target communication device is connected to the source communications device via the communications channel and is configured to receive the self-descriptive binary data structure from the source communication device. The self-descriptive binary structure includes data segments with a target data set and a data structure descriptor, as described above with reference to the summary of claim 1. Detailed Description, page 15, paragraph 54, lines 1-3; page 16, paragraph 60, lines 1-8. The target communication device is also configured to process an executable, which is stored in the self-descriptive binary data structure. Brief Summary, page 5, paragraph 13, lines 2-4.

The language of claim 18 relates to a method for communicating binary data using a self-descriptive binary data structure. The method includes generating the self-descriptive binary data structure. Brief Summary, page 4, paragraph 14, lines 4-7. The self-descriptive binary data structure includes data segments with a target data set and a data structure descriptor, as described above with reference to the summary of claim 1. Detailed Description, page 15, paragraph 54, lines 1-3; page 16, paragraph 60, lines 1-8. The method also includes communicating the self-descriptive binary data structure with a

communications interface coupled with a target device. Detailed Description, page 14, paragraph 51, lines 2-3. The method also includes processing an executable that is stored in the self-descriptive binary data structure. Brief Summary, page 5, paragraph 13, lines 2-4.

The language of claim 27 relates to a method for communicating binary data. The method includes providing a self-descriptive binary data structure at a source communications device. Detailed Description, page 14, paragraph 51, lines 1-2. The self-descriptive binary data structure includes a customizable directory descriptor, which provides a directory of the data stored in each of the data fields within the data structure. Detailed Description, page 16, paragraph 58, lines 4-7. The method also includes communicating the self-descriptive binary data structure between the source communication device and a target communication device via a communications network. Detailed Description, page 14, paragraph 51, lines 2-3. The method also includes processing the self-descriptive binary data structure at the target communications device. Brief Summary, page 5, paragraph 13, lines 2-4. The method also includes executing a bootstrap executable, which is configured to reference the customizable directory descriptor and to identify a location of a second target data set within the data structure using the customizable directory descriptor. Brief Summary, page 5, paragraph 13, lines 2-4.

The language of claim 29 relates to a computer readable storage medium with computer readable code for execution on a computer processor to carry out a method for communicating binary data using a self-descriptive binary data structure. The method includes generating a plurality of data segments. Detailed Description, page 14, paragraph 51, lines 1-2. The method also includes attaching a data structure descriptor to the plurality of data segments. Detailed Description, page 14, paragraph 51, lines 1-2. The method also includes identifying a target data set within the data field, storing a location of the target data set in the data structure descriptor, and sending the self-descriptive binary data structure to a target device. Detailed Description, page 71, paragraph 62-63.

The language of claim 40 relates to an apparatus for communicating binary data using a self-descriptive binary data structure. One exemplary structure corresponding to

the means for generating a plurality of data segments is the microcode reconstruct and boot (MRB) generation module 612 of Figure 6. Detailed Description, pages 13-14, paragraph 49, lines 3-5. One exemplary structure corresponding to the means for attaching a data structure descriptor to the plurality of data segments is also the MRB generation module 612 of Figure 6. One exemplary structure corresponding to the means for identifying a target data set within the data field is the MRB processing module 620 of Figure 6. One exemplary structure corresponding to the means for storing a location of the target data set is the memory device 616 of Figure 6. Detailed Description, page 17, paragraph 63, lines 3-4. One exemplary structure corresponding to the means for sending the self-descriptive binary data structure to a target device is the communications channel between the source 602 and the target 604. See Figure 6. This list of exemplary structures is not exhaustive, and other structures described within the present application may be configured to facilitate the functionality recited in claim 40.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1-14, 17-22, 26, 27, 29-36, and 38-40 are patentable over Sharon under 35 U.S.C. § 102(e).

B. Whether claims 15, 24, 28, and 37 are patentable over the combination of Sharon and Brown under 35 U.S.C. § 103(a).

VII. ARGUMENT

For the purposes of this appeal, claims 1-14, 17-22, 26, 27, 29-36, and 38-40 (Group A) are discussed under a single heading. Under this heading, claims 1, 4, 7-14, 17, 18, 21, 22, 26, 27, 29, 32, 34-36, and 38-40 (Subgroup A1) are argued together as a group; dependent claims 2, 19, and 30 (Subgroup A2) are argued together as a group; dependent claims 3, 20, and 31 (Subgroup A3) are argued together as a group; dependent claims 5 and 33 (Subgroup A4) are argued together as a group; dependent claim 6 (Subgroup A5) is argued as a separate group; and dependent claim 8 (Subgroup A6) is argued as a separate group. Claims 15, 24, 28, and 37 (Group B) are discussed under a separate heading, because of the separate ground of rejection for these claims, but rely on the arguments presented in conjunction with Group A, Subgroup A1.

A. Claims 1-14, 17-22, 26, 27, 29-36, and 38-40 are Patentable Over Sharon Because Sharon does not Disclose All of the Limitations of the Claims.

Claims 1-14, 17-22, 26, 27, 29-36, and 38-40 are discussed together under this subheading because these claims are all rejected under the same rejection. However, for the purposes of this appeal, these claims are argued as four separate groups. The first group includes claims 1, 4, 7-14, 17, 18, 21, 22, 26, 27, 29, 32, 34-36, and 38-40 (Subgroup A1), which are represented by independent claim 1. The second group includes claims 2, 19, and 30 (Subgroup A2), which are represented by claim 2. The third group includes claims 3, 20, and 31 (Subgroup A3), which are represented by claim 3. The fourth group includes claims 5 and 33 (Subgroup A4), which are represented by claim 5. The fifth group includes claim 6 (Subgroup A5). The sixth group includes claim 8 (Subgroup A6). In each of these groups, the cited reference fails to teach at least one of the limitations of the corresponding claims.

A1. Claims 1, 4, 7-14, 17, 18, 21, 22, 26, 27, 29, 32, 34-36, and 38-40 are Patentable Over Sharon Because Sharon does not Disclose a Binary Data Structure or a Data Structure Descriptor.

Appellant respectfully submit that claim 1 is patentable over Sharon because Sharon does not disclose all of the limitations of the claim. Claim 1 recites:

> A computer readable storage medium storing a self-descriptive binary data structure executable on a computer processor for communicating binary data between a source device and a target device, the computer readable storage medium comprising:
>
> a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;
>
> a target data set within the data field; and
>
> a data structure descriptor descriptive of the data structure, the data structure descriptor identifying the location of the target data set within the data field.

(Emphasis added.)

In contrast to the language of claim 1, the cited reference does not disclose all of the limitations of the claim. In particular, Sharon does not disclose a binary data

structure. Sharon merely describes ASCII data structures, which are not binary data structures. Specifically, Sharon describes S-record and Intel HEX data formats that are ASCII (text) containing one record per line. Sharon, paragraph 13, lines 1-2. Sharon also describes a streamlined format or data structure (designated as an "iAN file") that is similar to a conventional S-record. Sharon, paragraph 21, lines 1-6. Although the streamlined format differs significantly from the conventional S-record format in order to eliminate some of the data overhead of the conventional S-record format, according to Sharon (Sharon, paragraph 22, lines 1-2; paragraph 23, lines 1-3), the content of the streamlined format is nevertheless ASCII and/or HEX characters. For example, the data field of the exemplary streamlined format shown in Figure 3 contains the ASCII string "7C631B787C631B783C...," which is the same as the combined ASCII contents of the data fields of the three S-Records shown in Figure 2.

As a matter of clarification, it may be helpful to consider the common understanding of binary and ASCII data representations. In general, binary data structures use combinations of two values (e.g., "0" and "1") to represent the corresponding data. In contrast, ASCII data structures use combinations of as many as 128 different standard codes (e.g., "A, B, C... a, b, c... 1, 2, 3..." as well as some punctuation and several non-printing control characters) to represent the corresponding data. The differences between using two values (i.e., binary data structures) compared to 128 values (i.e., ASCII data structures) can be significant, for example, in terms of data conversions, processing time, and storage requirements. Similarly, HEX data structures are not binary data structures because HEX data structures use 16 codes values (e.g., 0, 1, 2... D, E, F") to represent the corresponding data. Thus, ASCII and HEX codes are not binary values, and ASCII and HEX data structures are not binary data structures. Hence, the ASCII and HEX data of Sharon is not binary data, and the ASCII and HEX S-record and streamlined formats of Sharon are not binary formats.

Moreover, even if Sharon were to disclose a binary data structure, Sharon nevertheless does not disclose a data structure descriptor to identify the location of a target data set within a data field of a self-descriptive binary data structure. As explained in the present application, the binary data structure is self-descriptive because the data structure descriptor indicates the location of the target data set within one of the data

segments. Brief Summary, paragraph 10, lines 5-7. However, none of the data structures described in Sharon (S-record, Intel HEX, or streamlined iAN format) includes a data structure descriptor to identify a location of a target data set within a data field of the same data structure. Sharon merely describes an address portion of an S-record line which indicates to the target device (the device receiving the data transmission) that the transmitted data is to be loaded into the target device's memory at the indicated memory address. Sharon, paragraph 17; paragraph 20, lines 4-7. In other words, the data start address of the S-record merely indicates where to store the data on the target. The data start address of the S-record or the streamlined data format does not indicate a location of a target data set within a data field of the transmitted data structure. Furthermore, Sharon does not appear to disclose a target data set within a data field of the described data structures. Thus, the S-record and the streamlined data format are not "self-descriptive" because the S-record and the streamlined data format do not include a data structure descriptor to identify the location of a target data set within a data field of the data structure.

Therefore, Sharon does not disclose all of the limitations of the claim because Sharon does not disclose a binary data structure or a self-descriptive data structure with a data structure descriptor to identify the location of a target data set within a data field of a self-descriptive binary data structure. Thus, Appellant submits claim 1 is patentable over Sharon because Sharon does not disclose all of the limitations of the claim. Accordingly, Appellant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 102(e) be withdrawn.

Appellant respectfully submits that independent claims 13, 18, 27, 29, and 40 are also patentable over the combination of cited references for at least one of the reasons stated above in regard to the rejection of independent claim 1. Each of claims 13, 18, 27, 29, and 40 recites at least one limitation related to a binary data structure, a self-descriptive data structure, or a data structure with a data structure descriptor to identify the location of a target data set within a data field of a self-descriptive binary data structure. Thus, although the language of these claims differs from the language of claim 1 and the scope of these claims should be interpreted independently of claim 1, Appellant respectfully asserts that the remarks provided above in regard to the rejection of claim 1

also apply to the rejections of claims 13, 18, 27, 29, and 40. Accordingly, Appellant respectfully submits claims 13, 18, 27, 29, and 40 are patentable over Sharon and requests that the rejections of these claims under 35 U.S.C. § 102(e) be withdrawn.

Given that claims 2-12, 14, 15, 17, 19-22, 24, 26, 28, and 30-39 depend from and incorporate all of the limitations of the corresponding independent claims 1, 13, 18, 27, and 29, which are patentable over the cited reference, Appellant respectfully submits that dependent claims 2-12, 14, 15, 17, 19-22, 24, 26, 28, and 30-39 are also patentable over the cited reference based on allowable base claims. Additionally, each of claims 2-12, 14, 15, 17-22, 24, and 26-40 may be allowable for further reasons, as described below. Accordingly, Appellant requests that the rejections of claims 1-12, 13, 14, 17-23, 26, 27, 29-36, and 38-40 under 35 U.S.C. § 102(e) and the rejections of claims 15, 24, 28, and 37 under 35 U.S.C. § 103(a) be withdrawn.

A2. Claims 2, 19, and 30 are Patentable Over Sharon Because Sharon does not Disclose a Directory of Data.

Claims 2, 19, and 30 depend from and incorporate all of the limitations of the corresponding independent claims 1, 18, and 29. Appellant respectfully assert claims 3 2, 19, and 30 are allowable based on allowable base claims. Additionally, each of claims 2, 19, and 30 are allowable for further reasons, as explained below. In regard to claims 2, 19, and 30, Appellant respectfully submits that claims 2, 19, and 30 are patentable over Sharon because Sharon does not disclose all of the limitations of the claims. Claim 2 recites:

> The computer readable storage medium of claim 1, further comprising a customizable directory descriptor, the customizable directory descriptor configured to provide a directory of the data stored in each of the data fields within the data structure.
> (Emphasis added.)

In contrast, Sharon does not disclose a customizable directory descriptor, as recited in the claims. The cited portion of Sharon merely addresses the streamlined format (i.e., the iAN file), which only includes a data start address field, a CRC field, and a data field. None of these fields is described as including a customizable directory descriptor to provide a directory of the data stored in the data field. Therefore, Sharon

does not disclose all of the limitations of the claims because Sharon does not disclose a customizable directory descriptor, as recited in the claims. Accordingly, Appellant requests that the rejections of claims 2, 19, and 30 under 35 U.S.C. § 102(e) be withdrawn.

A3. Claims 3, 20, and 31 are Patentable Over Sharon Because Sharon does not Disclose a Customizable Directory Descriptor.

Claims 3, 20, and 31 depend from and incorporate all of the limitations of the corresponding independent claims 1, 18, and 29. Appellant respectfully assert claims 3, 20, and 31 are allowable based on allowable base claims. Additionally, each of claims 3, 20, and 31 are allowable for further reasons, as explained below. In regard to claims 3, 20, and 31, Appellant respectfully submits that claims 3, 20, and 31 are patentable over Sharon because Sharon does not disclose all of the limitations of the claims. Claim 3 recites:

> The computer readable storage medium of claim 2, wherein the target data set comprises a bootstrap executable, the bootstrap executable configured to reference the customizable directory descriptor and to identify a location of a second target data set within the data structure using the customizable directory descriptor.

(Emphasis added.)

In contrast, Sharon does not disclose a customizable directory descriptor, as explained above. Hence, Sharon also fails to disclose referencing a customizable directory descriptor or identifying a location of a second target data set using the customizable directory descriptor. Therefore, Sharon does not disclose all of the limitations of the claims because Sharon does not disclose referencing or identifying operations using the customizable directory descriptor, as recited in the claims. Accordingly, Appellant requests that the rejections of claims 3, 20, and 31 under 35 U.S.C. § 102(e) be withdrawn.

A4. Claims 5 and 33 are Patentable Over Sharon Because Sharon does not Disclose a Data Structure Version Descriptor.

Claims 5 and 33 depend from and incorporate all of the limitations of the corresponding independent claims 1 and 29. Appellant respectfully assert claims 5 and 33 are allowable based on allowable base claims. Additionally, each of claims 5 and 33 are allowable for further reasons, as explained below. In regard to claims 5 and 33, Appellant respectfully submits that claims 5 and 33 are patentable over Sharon because Sharon does not disclose all of the limitations of the claims. Claim 5 recites:

> The computer readable storage medium of claim 1, further comprising a data structure version descriptor configured to indicate a version of the data structure.
> (Emphasis added.)

In contrast, Sharon does not disclose a data structure version descriptor to indicate a version of the data structure. Although Sharon mentions that program upgrades may be downloaded from time to time as new versions become available (Sharon, paragraph 3, lines 3-4), the recognition that program updates are updated in versions is insufficient to disclose a data structure version descriptor to indicate the version of the data structure. Moreover, Sharon does not disclose any type of contents within the S-record or the streamlined format which include a version indicator. Therefore, Sharon does not disclose all of the limitations of the claims because Sharon does not disclose a data structure version descriptor, as recited in the claims. Accordingly, Appellant requests that the rejections of claims 5 and 33 under 35 U.S.C. § 102(e) be withdrawn.

A5. Claim 6 is Patentable Over Sharon Because Sharon does not Disclose a Data Structure Name Descriptor.

Claim 6 depends from and incorporates all of the limitations of independent claim 1. Appellant respectfully asserts claim 6 is allowable based on an allowable base claim. Additionally, claim 6 is allowable for further reasons, as explained below. In regard to claim 6, Appellant respectfully submits that claim 6 is patentable over Sharon because Sharon does not disclose all of the limitations of the claim. Claim 6 recites:

> The computer readable storage medium of claim 1, further comprising a data structure name descriptor configured to indicate a name of the data structure.
>
> (Emphasis added.)

In contrast, Sharon does not disclose a data structure name descriptor to indicate a name of the data structure. The cited portion of Sharon merely describes conventional S-record and Intel HEX formats. The conventional S-record format includes a type field, a record length field, a data start address field, a data field, and a check sum field. Sharon, Figure 2. However, the conventional S-record does not include a data structure name field to indicate a name of the data structure. Additionally, Sharon does not describe the Intel HEX format as including a data structure name field. Therefore, Sharon does not disclose all of the limitations of the claim because Sharon does not disclose a data structure name descriptor, as recited in the claim. Accordingly, Appellant requests that the rejection of claim 6 under 35 U.S.C. § 102(e) be withdrawn.

A6. Claim 8 is Patentable Over Sharon Because Sharon does not Disclose a Data Structure Count Descriptor.

Claim 8 depends from and incorporates all of the limitations of independent claim 1. Appellant respectfully asserts claim 8 is allowable based on an allowable base claim. Additionally, claim 8 is allowable for further reasons, as explained below. In regard to claim 8, Appellant respectfully submits that claim 8 is patentable over Sharon because Sharon does not disclose all of the limitations of the claim. Claim 6 recites:

> The computer readable storage medium of claim 1, further comprising a data structure count descriptor configured to indicate a number of the plurality of data segments within the data structure.
>
> (Emphasis added.)

In contrast, Sharon does not disclose a data structure count descriptor to indicate a number of data segments within the data structure. The cited portion of Sharon merely describes that the conventional S-record format may be an S0 record type. However, Sharon does not describe the S0 record type as indicating a number of data segments within the data structure. Moreover, the conventional S-records merely have one data field per record line, so there appears to be no need to indicate the number of data fields

within each record line. Furthermore, Sharon does not appear to describe any fields for the S-record format to indicate how many record lines might be in each S-record. Additionally, the streamlined format described in Sharon also only has one data field, so there appears to be no need to indicate the number of data fields within each iAN file using the streamlined format. Therefore, Sharon does not disclose all of the limitations of the claim because Sharon does not disclose a data structure count descriptor, as recited in the claim. Accordingly, Appellant requests that the rejection of claim 8 under 35 U.S.C. § 102(e) be withdrawn.

B. Claims 15, 24, 28, and 37 are Patentable over the Combination of Sharon and Brown Because the Combination of Sharon and Brown Does not Teach All of the Limitations of the Claims.

Claims 15, 24, 28, and 37 depend from and incorporate all of the limitations of the corresponding independent claims 1, 18, 27, and 29. Appellant respectfully assert claims 15, 24, 28, and 37 are allowable based on allowable base claims. Accordingly, Appellant request that the rejections of claims 15, 24, 28, and 37 under 35 U.S.C. 103(a) be withdrawn. Additionally, each of claims 15, 24, 28, and 37 may be allowable for further reasons.

VIII. CONCLUSION

For the reasons stated above, claims 1-15, 17-22, 24, and 26-40 are patentable over the cited references. Thus, the rejections of claims 1-15, 17-22, 24, and 26-40 should be withdrawn. Appellant respectfully requests that the Board reverse the rejections of claims 1-15, 17-22, 24, and 26-40 under 35 U.S.C. §§ 102(e) and 103(a), since there are no remaining grounds of rejection to be overcome, direct the Examiner to enter a Notice of Allowance for claims 1-15, 17-22, 24, and 26-40.

Respectfully submitted,

Date: December 26, 2007

/Brian C. Kunzler/

Brian C. Kunzler
Reg. No. 38,527

Kunzler & McKenzie
8 East Broadway, Suite 600
Salt Lake City, Utah 84111
(801) 994-4646 voice
(801) 531-1929 fax

IX. CLAIMS APPENDIX

1. (Previously Presented) A computer readable storage medium storing a self-descriptive binary data structure executable on a computer processor for communicating binary data between a source device and a target device, the computer readable storage medium comprising:

a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;

a target data set within the data field; and

a data structure descriptor descriptive of the data structure, the data structure descriptor identifying the location of the target data set within the data field.

2. (Previously Presented) The computer readable storage medium of claim 1, further comprising a customizable directory descriptor, the customizable directory descriptor configured to provide a directory of the data stored in each of the data fields within the data structure.

3. (Previously Presented) The computer readable storage medium of claim 2, wherein the target data set comprises a bootstrap executable, the bootstrap executable configured to reference the customizable directory descriptor and to identify a location of a second target data set within the data structure using the customizable directory descriptor.

4. (Previously Presented) The computer readable storage medium of claim 3, wherein the bootstrap executable is further configured to access the second target data set within the data structure.

5. (Previously Presented) The computer readable storage medium of claim 1, further comprising a data structure version descriptor configured to indicate a version of the data structure.

6. (Previously Presented) The computer readable storage medium of claim 1, further comprising a data structure name descriptor configured to indicate a name of the data structure.

7. (Previously Presented) The computer readable storage medium of claim 1, further comprising a data structure type descriptor configured to indicate a type of the data structure.

8. (Previously Presented) The computer readable storage medium of claim 1, further comprising a data structure count descriptor configured to indicate a number of the plurality of data segments within the data structure.

9. (Previously Presented) The computer readable storage medium of claim 1, wherein the target data set is an executable.

10. (Previously Presented) The computer readable storage medium of claim 1, wherein the target data set is a code image.

11. (Previously Presented) The computer readable storage medium of claim 1, wherein one of the plurality of data segments is an alignment data segment configured to align the size of the data structure for at least one of error detection and correction.

12. (Previously Presented) The computer readable storage medium of claim 1, wherein the data segment header comprises a flag field configured to store a flag, the flag descriptive of the data stored in the data field.

13. (Previously Presented) A system for communicating binary data using a self-descriptive binary data structure capable of being stored in a computer readable storage medium, the system comprising:

a communications channel;

a source communication device connected to the communications channel and configured to transmit a self-descriptive binary data structure;

a target communication device connected to the source communications device via the communications channel and configured to receive the self-descriptive binary data structure from the source communication device:

wherein the self-descriptive binary data structure comprises:

a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;

a target data set within the data field;

a data structure descriptor descriptive of the data structure, the data structure descriptor configured to identify the location of the target data set within the data field; and

wherein the target communication device is configured to process an executable, the executable stored in the self-descriptive binary data structure.

14. (Previously Presented) The system of claim 13, wherein the source communication device is further configured to generate the self-descriptive binary data structure.

15. (Previously Presented) The system of claim 14, wherein the source communication device is further configured to generate the self-descriptive binary data structure from a non-binary data structure.

16. (Canceled)

17. (Previously Presented) The system of claim 13, wherein the executable comprises a bootstrap executable, the bootstrap executable configured to access a code image within the data structure.

18. (Previously Presented) A method for communicating binary data using a self-descriptive binary data structure, the method comprising:

generating a self descriptive binary data structure comprising:

a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;

a target data set within the data field; and

a data structure descriptor to the plurality of data segments, the data structure descriptor descriptive of the data structure;

communicating the self descriptive binary data structure with a communications interface coupled with a target device; and

processing an executable that is stored in the self-descriptive binary data structure.

19. (Previously Presented) The method of claim 18, further comprising storing a customizable directory descriptor and providing a directory of the data stored in each of the data fields within the data structure.

20. (Previously Presented) The method of claim 19, further comprising storing a bootstrap executable and identifying a location of a second target data set within the data structure using the customizable directory descriptor.

21. (Previously Presented) The method of claim 20, further comprising accessing the second target data set within the data structure.

22. (Previously Presented) The method of claim 18, wherein generating the plurality of data segments comprises generating an alignment data segment and aligning the size of the data structure for at least one of error detection and correction.

23. (Canceled)

24. (Previously Presented) The method of claim 18, wherein generating a plurality of data segments comprises generating the plurality of data segments from a non-binary data structure.

25. (Canceled)

26. (Previously Presented) The method of claim 18, wherein processing an executable comprises processing a bootstrap executable, the bootstrap executable configured to access a code image within the data structure.

27. (Previously Presented) A method for communicating binary data, the method comprising:

providing a self-descriptive binary data structure at a source communications device, the self-descriptive binary data structure having a customizable directory descriptor, the customizable descriptor configured to provide a directory of the data stored in each of the data fields within the data structure;

communicating the self-descriptive binary data structure between a source communication device and a target communication device via a communications network;

processing the self-descriptive binary data structure at the target communications device; and

executing a bootstrap executable, the bootstrap executable configured to reference the customizable directory descriptor and to identify a location of a

second target data set within the data structure using the customizable directory descriptor.

28. (Original) The method of claim 27, wherein providing the self-descriptive binary data structure comprises converting a non-binary data structure into the self-descriptive binary data structure.

29. (Previously Presented) A computer readable storage medium comprising computer readable code for execution on a computer processor to carry out a method for communicating binary data using a self-descriptive binary data structure, the method comprising:

generating a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;

attaching a data structure descriptor to the plurality of data segments, the data structure descriptor descriptive of the data structure;

identifying a target data set within the data field;

storing a location of the target data set in the data structure descriptor; and

sending the self-descriptive binary data structure to a target device.

30. (Original) The computer readable storage medium of claim 29, wherein the method further comprises storing a customizable directory descriptor and providing a directory of the data stored in each of the data fields within the data structure.

31. (Original) The computer readable storage medium of claim 30, wherein the method further comprises storing a bootstrap executable and identifying a location of a second target data set within the data structure using the customizable directory descriptor.

32. (Original) The computer readable storage medium of claim 31, wherein the method further comprises accessing the second target data set within the data structure.

33. (Original) The computer readable storage medium of claim 29, wherein the method further comprises wherein the data structure descriptor comprises at least one of data structure version descriptor, a data structure name descriptor, a data structure type descriptor, and a data structure count descriptor.

34. (Original) The computer readable storage medium of claim 29, wherein the method further comprises generating an alignment data segment and aligning the size of the data structure for at least one of error detection and correction.

35. (Original) The computer readable storage medium of claim 29, wherein the method further comprises storing a flag in the data segment header, the flag descriptive of the data stored in the data field.

36. (Original) The computer readable storage medium of claim 29, wherein the method further comprises communicating the self-descriptive binary data structure between a source communications device and a target communications device.

37. (Original) The computer readable storage medium of claim 29, wherein the method further comprises generating the plurality of data segments from a non-binary data structure.

38. (Original) The computer readable storage medium of claim 29, wherein the method further comprises processing an executable that is stored in the self-descriptive binary data structure.

39. (Original) The computer readable storage medium of claim 29, wherein the method further comprises processing a bootstrap executable, the bootstrap executable configured to access a code image within the data structure.

40. (Previously Presented) An apparatus for communicating binary data using a self-descriptive binary data structure, the apparatus comprising:

means for generating a plurality of data segments, each of the plurality of data segments comprising a segment header and a data field, the segment header descriptive of the corresponding data segment;

means for attaching a data structure descriptor to the plurality of data segments, the data structure descriptor descriptive of the data structure;

means for identifying a target data set within the data field;

means for storing a location of the target data set in the data structure descriptor on a storage device; and

means for sending the self-descriptive binary data structure to a target device.

X. EVIDENCE APPENDIX

There is no evidence submitted with this Appeal Brief.

XI. RELATED PROCEEDINGS APPENDIX

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision in the instant appeal.